AUDIT REPORT

Hostname: Dist_Router
Config file name: Dist_Router_startup-config.cfg
Config hash: 5075c1c44959d1080e492c8bacb6d3b6c52af691
Vendor: cisco
OS: ios
Facility layer: distribution
L3 protocols: ipv4,ipv6
Enabled functions: rip,ospf ipv4,eigrp named
Date: 18/05/2020_09:43

SUCCESS STATISTICS

Weighted score coefficient:	55 out of 100
Successful checks:	33.6%
Unsuccessful checks:	66.4%
Total number of relevant started checks:	140
Successful checks:	47
Unsuccessful 'Critical':	17
Unsuccessful 'High':	39
Unsuccessful 'Medium':	31
Unsuccessful 'Low':	6
Unsuccessful 'Notice':	0

Authentication, Authorization, Accounting

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	AAA new model/ Enabled AAA	High	False	False	Error ✘

Generated fix:
aaa new-model

| 2 | AAA server set | High | False | False | Error ✘ |

Generated fix:
radius server RADIUS_SERVER
address ipv4 192.168.60.11
key RadKey1

| 3 | AAA server group | High | False | False | Error ✘ |

Generated fix:
aaa group server radius RADIUS_SERVER
server name RADIUS_SERVER

| 4 | AAA authentication login | High | False | False | Error ✘ |

Generated fix:
aaa authentication login default group RADIUS_SERVER local enable

| 5 | AAA authentication login fallback | High | False | False | Error ✘ |

Generated fix:
aaa authentication login default group RADIUS_SERVER local enable

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
6	AAA authentication login only local disabled	High	False	False	Successful ✔
7	AAA authentication login none disabled	Critical	False	False	Successful ✔
8	AAA authentication "enable"	Medium	False	False	Error ✘

Generated fix:
aaa authentication enable default group RADIUS_SERVER enable

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
9	AAA authentication "enable" fallback	Medium	False	False	Error ✘

Generated fix:
aaa authentication enable default group RADIUS_SERVER enable

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
10	AAA authentication "enable" only local disabled	Medium	False	False	Successful ✔
11	AAA authentication "enable" none disabled	High	False	False	Successful ✔
12	AAA authorization "exec"	High	False	False	Error ✘

Generated fix:
aaa authorization exec default group RADIUS_SERVER local if-authenticated

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
13	AAA authorization "exec" fallback	High	False	False	Error ✘

Generated fix:
aaa authorization exec default group RADIUS_SERVER local if-authenticated

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
14	AAA authorization "exec" only local disabled	High	False	False	Successful ✔
15	AAA authorization "exec" none disabled	Critical	False	False	Successful ✔
16	AAA accounting "connection"	High	False	False	Error ✘

Generated fix:
aaa accounting connection default start-stop group RADIUS_SERVER

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
17	AAA auccounting "connection" none disabled	High	False	False	Successful ✔
18	AAA accounting "exec"	High	False	False	Error ✘

Generated fix:
aaa accounting exec default start-stop group RADIUS_SERVER

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
19	AAA accounting "exec" none disabled	High	False	False	Successful ✔
20	AAA source interface	Medium	False	False	Error ✘

Generated fix:
ip radius source-interface Loopback0

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
21	AAA authentication max attempts less or equal to 5	High	False	False	Successful ✔

Access to device

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	Exec timeout <=5 minutes	Medium	False	False	Error ✘

Found error in context(s):
line con 0
line vty 0 4

Generated fix:
line con 0
exec-timeout 5

line vty 0 4
exec-timeout 5

2	AUX connection input disabled	High	False	False	Successful ✔
3	AUX no execution set	High	False	False	Error ✘

Found error in context(s):
line aux 0

Generated fix:
line aux 0
no exec

4	Remote output connections disabled	Medium	False	False	Error ✘

Found error in context(s):
line con 0
line aux 0
line vty 0 4

Generated fix:
line con 0
transport output none

line aux 0
transport output none

line vty 0 4
transport output none

5	Local user database with encrypted password	Critical	False	False	Error ✘

Generated fix:
username admin secret admin_password

6	Local user database with plaintext password disabled	Critical	False	False	Successful ✔
7	Enable password encrypted	Critical	False	False	Error ✘

Generated fix:
enable secret enablepasswd123

8	Enable password plaintext disabled	Critical	False	False	Successful ✔
9	Local login to virtual terminal disabled	Critical	False	False	Error ✘

Error configuration setting found in:
line vty 0 4
login

Found error in context(s):
line vty 0 4

10	Restrict login to device - IPv4 ACL	Critical	False	False	Error ✘

Found error in context(s):
line vty 0 4

Generated fix:
line vty 0 4
access-class IPV4_VTY_ACL in

11	ACL specified for VTY access is created	Critical	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Fix notice:
Cannot be fixed automatically! If search is not successful create ACL, which permits only needed end stations for managing devices with these commands:
ip access-list standard <acl name>
remark Permiting managemnt device
permit <ip address> <wildcard mask>

12	Log login to device on failure	High	False	False	Error ✘

Generated fix:
login on-failure trap
login on-failure log
login on-failure log-input

Fix notice:
Depending on IOS, usually just one of fixing command is applicable to device. There are more because of different syntax and support among IOS versions.

13	Log login to device on success	Medium	False	False	Error ✘

Generated fix:
login on-success trap
login on-success log
login on-success log-input

Fix notice:
Depending on IOS, usually just one of fixing command is applicable to device. There are more because of different syntax and support among IOS versions.

14	Login quiet mode	Medium	False	False	Error ✘

Generated fix:
login quiet-mode access-class IPV4_VTY_ACL

15	ACL exists for specified login quiet mode	Medium	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Fix notice:
Cannot be fixed automatically! If search is not successful create ACL, which permits only needed end stations for managing devices with these commands:
ip access-list standard <acl name>
remark Permiting managemnt device
permit <ip address> <wildcard mask>

16	One user change config at time	High	False	False	Error ✘

Generated fix:
configuration mode exclusive
configuration mode exclusive auto

Fix notice:
Just one of fixing command is applicable to device. There are more because of different syntax among IOS versions.

17	Legal banner MOTD	Low	False	False	Error ✘

Generated fix:
banner motd ; Unauthorized access will be prosecuted!! ;

18	Legal banner exec	Low	False	False	Error ✘

Generated fix:
banner exec ; Unauthorized access will be prosecuted!! ;

19	Legal banner login	Low	False	False	Error ✘

Generated fix:
banner login ; Unauthorized access will be prosecuted!! ;

20	Session timeout	Medium	False	False	Error ✘

Found error in context(s):
line con 0
line aux 0
line vty 0 4

Generated fix:
line con 0
session-timeout 30

line aux 0
session-timeout 30

line vty 0 4
session-timeout 30

21	AUX exec timeout one second	High	False	False	Error ✘

Found error in context(s):
line aux 0

Generated fix:
line aux 0
exec-timeout 0 1

22	Restrict login to device - IPv6 ACL	Critical	False	False	Error ✘

Found error in context(s):
line vty 0 4

Generated fix:
line vty 0 4
ipv6 access-class IPV6_VTY_ACL in

23	ACL IPv6 specified for VTY access is created	Critical	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Fix notice:
Cannot be fixed automatically! If search is not successful create ACL, which permits only needed end stations for managing devices with these commands:
ipv6 access-list <acl name>
remark Permiting managemnt device
permit ip <ip address> <wildcard mask> any

24	Login DOS block for	High	False	False	Error ✘

Generated fix:
login block-for 120 attempts 3 within 30

SSH

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	SSH enable on management connection	Critical	False	False	Error ✘

Found error in context(s):
line vty 0 4

Generated fix:
line vty 0 4
transport input ssh

Fix notice:
Make sure RSA key is present - generated or imported. For generating RSA key, issue command:
crypto key generate rsa modulus 2048

2	SSH version 2	Critical	False	False	Error ✘

Generated fix:
ip ssh version 2

3	SSH timeout	Medium	False	False	Error ✘

Generated fix:
ip ssh timeout 30
ip ssh time-out 30

Fix notice:
Just one of fixing command is applicable to device. There are more because of different syntax among IOS versions.

4	SSH max 3 retries	Medium	False	False	Successful ✔
5	SSH source interface	High	False	False	Error ✘

Generated fix:
ip ssh source-interface Loopback0

6	SSH not default port	High	False	False	Error ✘

Generated fix:
ip ssh port 2223 rotary 1

7	SSH not default port applied	High	False	False	Error ✘

Found error in context(s):
line vty 0 4

Generated fix:
line vty 0 4
rotary 1

Device identification

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	Hostname set	Low	False	False	Successful ✔

Comment:
Cannot be fixed automatically!

Right configuration setting found in:
hostname Dist_Router

2	Domain name set	Low	False	False	Error ✘

Generated fix:
ip domain-name thesis-test.cz
ip domain name thesis-test.cz

Fix notice:
Just one of fixing command is applicable to device. There are more because of different syntax among IOS versions.

3	All interfaces have description	Low	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Right configuration setting found in:
interface Ethernet0/0
description uplink

Found port(s) with error:
Tunnel0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Fix notice:
Set interface descrtiption with command:
interface <interface name>
description <description of interface>

Fix ignore comment:
Fixing commands suppressed due to manual need of manual chenage and name determination.

SNMP

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	SNMP v2 write disabled	Critical	False	False	Successful ✔
2	SNMP v2 read without ACL disabled	Critical	False	False	Successful ✔
3	SNMP v2 read with ACL disabled	Critical	False	False	Successful ✔
4	SNMP v1 trap host disabled	Critical	False	False	Successful ✔
5	SNMP v2 trap host disabled	Critical	False	False	Successful ✔
6	SNMP v3 read [authnopriv|noauth|authpriv without ACL] or write disabled	Critical	False	False	Successful ✔
7	SNMP v3 read authpriv with ACL enabled	Critical	False	False	Error ✘

Generated fix:
snmp-server group SNMP_V3_GRP v3 priv read READVIEWv3 access SNMP_V3
snmp-server user SNMPv3USER SNMP_V3_GRP v3 auth sha SnmpPasswd123 priv aes 256 SnmpPasswd123 access SNMP_V3

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
8	SNMP v3 read authpriv with IPv6 ACL enabled	Critical	False	False	Error ✘

Generated fix:
snmp-server group SNMP_V3_GRP_IPV6 v3 priv read READVIEWv3 access ipv6 SNMP_V3_ACL6
snmp-server user SNMPv3USER SNMP_V3_GRP_IPV6 v3 auth sha SnmpPasswd123 priv aes 256 SnmpPasswd123 access SNMP_V3_ACL6

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
9	SNMP user v1|v2c or v3 [noauth|authnopriv|no sha|no aes|without ACL] disabled	Critical	False	False	Successful ✔
10	SNMP trap source interface	High	False	False	Error ✘

Generated fix:
snmp-server trap-source Loopback0

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
11	SNMP server location	High	False	False	Error ✘

Generated fix:
snmp-server location GNS3LAB

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
12	SNMP v3 traps priv	Medium	False	False	Error ✘

Generated fix:
snmp-server host 192.168.60.11 version 3 priv SNMPv3USER

13	SNMP traps v3 read [authnopriv|noauth] or v1|v2 disabled	Critical	False	False	Successful ✔
14	SNMP traps enabled	Medium	False	False	Error ✘

Generated fix:
snmp-server enable traps

15	ACL is created for SNMPv3	Critical	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Fix notice:
Cannot be fixed automatically! If search is not successful create ACL, which permits only needed end stations for receiving SNMP with these commands:
ip access-list standard <acl name>
remark Permiting SNMP
permit <ip address> <wildcard mask>

16	ACL IPv6 is created for SNMPv3	Critical	False	False	Error ✘

Comment:
Cannot be fixed automatically!

Fix notice:
Cannot be fixed automatically! If search is not successful create ACL, which permits only needed end stations for receiving SNMP with these commands:
ipv6 access-list <acl name>
remark Permiting managemnt device
permit ip <ip address> <wildcard mask> any

17	SNMP interface index persist enabled globally	High	False	False	Error ✘

Generated fix:
snmp-server ifindex persist
snmp ifmib ifindex persist

Fix notice:
Just one of fixing command is applicable to device. There are more because of different syntax among IOS versions.

18	SNMP interface index persist enabled per interface	High	False	False	Error ✘

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
snmp ifindex persist
exit
interface Ethernet0/0
snmp ifindex persist
exit
interface Ethernet0/1
snmp ifindex persist
exit
interface Ethernet0/2
snmp ifindex persist
exit
interface Ethernet0/3
snmp ifindex persist
exit
interface Ethernet1/0
snmp ifindex persist
exit
interface Ethernet1/1
snmp ifindex persist
exit
interface Ethernet1/2
snmp ifindex persist
exit
interface Ethernet1/3
snmp ifindex persist
exit
interface Serial2/0
snmp ifindex persist
exit
interface Serial2/1
snmp ifindex persist
exit
interface Serial2/2
snmp ifindex persist
exit
interface Serial2/3
snmp ifindex persist
exit
interface Serial3/0
snmp ifindex persist
exit
interface Serial3/1
snmp ifindex persist
exit
interface Serial3/2
snmp ifindex persist
exit
interface Serial3/3
snmp ifindex persist
exit

Syslog

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	Syslog server enabled	High	False	False	Error ✘
	Generated fix: logging host 192.168.60.11				
2	Syslog server IPv6 enabled	High	False	False	Error ✘
	Generated fix: logging host ipv6 fd00:60::2050:79ff:fe66:6805				
3	Syslog source interface	Medium	False	False	Error ✘
	Generated fix: logging source-interface Loopback0				
4	Syslog format	Medium	False	False	Successful ✔

Right configuration setting found in:
service timestamps log datetime msec

| 5 | Syslog critical alerts to console | Medium | False | False | Error ✘ |

Generated fix:
logging console critical

| 6 | Syslog send informational traps | High | False | False | Successful ✔ |
| 7 | Syslog buffer set with severity | High | False | False | Error ✘ |

Generated fix:
logging buffered 40960 informational

| 8 | Syslog local backup | High | False | False | Error ✘ |

Generated fix:
logging persistent url flash:

| 9 | Syslog sequence numbers added | Medium | False | False | Error ✘ |

Generated fix:
service sequence-numbers

NTP

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	NTP server set	High	False	False	Error ✘

Generated fix:
ntp server 192.168.60.11

| 2 | NTP source interface | Medium | False | False | Error ✘ |

Generated fix:
ntp source Loopback0

| 3 | NTP authentication key | High | False | False | Error ✘ |

Generated fix:
ntp authentication-key 1 md5 ntpPasswd123

| 4 | NTP trusted key | High | False | False | Error ✘ |

Generated fix:
ntp trusted-key 1

| 5 | NTP authenticate | High | False | False | Error ✘ |

Generated fix:
ntp authenticate

High load

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	SNMP traps for CPU load	Medium	False	False	Error ✘

Generated fix:
snmp-server enable traps cpu threshold

| 2 | Threshold for CPU load | Medium | False | False | Error ✘ |

Generated fix:
process cpu threshold type total rising 70 interval 5

3	Statistics entry for CPU load	Low	False	False	Error ✘

Generated fix:
process cpu statistics limit entry-percentage 70

4	Reserve memory for critical notification	Medium	False	False	Error ✘

Generated fix:
memory reserve critical 1000

5	Minimum CPU memory notification	Medium	False	False	Error ✘

Generated fix:
memory free low-watermark processor 2000

6	Minimum IO memory notification	Medium	False	False	Error ✘

Generated fix:
memory free low-watermark io 2000

Network Mapping

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	CDP globally disabled	Critical	False	False	Error ✘

Generated fix:
no cdp run

Fix notice:
Services such as Cisco IP telephony would not work

2	CDP disabled on interface(s)	Critical	False	False	Error ✘

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
no cdp enable
exit
interface Ethernet0/0
no cdp enable
exit
interface Ethernet0/1
no cdp enable
exit
interface Ethernet0/1.50
no cdp enable
exit
interface Ethernet0/1.60
no cdp enable
exit
interface Ethernet0/2
no cdp enable
exit
interface Ethernet0/3
no cdp enable
exit
interface Ethernet1/0
no cdp enable
exit
interface Ethernet1/1
no cdp enable
exit
interface Ethernet1/2
no cdp enable
exit
interface Ethernet1/3
no cdp enable
exit
interface Serial2/0
no cdp enable
exit
interface Serial2/1
no cdp enable
exit
interface Serial2/2
no cdp enable
exit
interface Serial2/3
no cdp enable
exit
interface Serial3/0
no cdp enable
exit
interface Serial3/1
no cdp enable
exit
interface Serial3/2
no cdp enable
exit
interface Serial3/3
no cdp enable
exit

| 3 | LLDP globally disabled | Critical | False | False | Successful ✔ |
| 4 | LLDP receive disabled on interface(s) | Critical | False | False | Not relevant ✔ |

Comment:
Module 11_04_lldp_receive.yaml configured to run after 11_03_lldp_run_disabled.yaml with status error but that module has not run yet with specified cmd_match_status, 11_04_lldp_receive.yaml will not run

| 5 | LLDP transmit disabled on interface(s) | Critical | False | False | Not relevant ✔ |

Comment:
Module 11_05_lldp_transmit.yaml configured to run after 11_03_lldp_run_disabled.yaml with status error but that module has not run yet with specified cmd_match_status, 11_05_lldp_transmit.yaml will not run

| 6 | Proxy ARP disabled on interface(s) | Critical | False | False | Error ✘ |

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
no ip proxy-arp
exit
interface Ethernet0/0
no ip proxy-arp
exit
interface Ethernet0/1
no ip proxy-arp
exit
interface Ethernet0/1.50
no ip proxy-arp
exit
interface Ethernet0/1.60
no ip proxy-arp
exit
interface Ethernet0/2
no ip proxy-arp
exit
interface Ethernet0/3
no ip proxy-arp
exit
interface Ethernet1/0
no ip proxy-arp
exit
interface Ethernet1/1
no ip proxy-arp
exit
interface Ethernet1/2
no ip proxy-arp
exit
interface Ethernet1/3
no ip proxy-arp
exit
interface Serial2/0
no ip proxy-arp
exit
interface Serial2/1
no ip proxy-arp
exit
interface Serial2/2
no ip proxy-arp
exit
interface Serial2/3
no ip proxy-arp
exit
interface Serial3/0
no ip proxy-arp
exit
interface Serial3/1
no ip proxy-arp
exit
interface Serial3/2
no ip proxy-arp
exit
interface Serial3/3
no ip proxy-arp
exit

7	ICMP Unreachable disabled on interface(s)	High	False	False	Error ✗

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
no ip unreachables
exit
interface Ethernet0/0
no ip unreachables
exit
interface Ethernet0/1
no ip unreachables
exit
interface Ethernet0/1.50
no ip unreachables
exit
interface Ethernet0/1.60
no ip unreachables
exit
interface Ethernet0/2
no ip unreachables
exit
interface Ethernet0/3
no ip unreachables
exit
interface Ethernet1/0
no ip unreachables
exit
interface Ethernet1/1
no ip unreachables
exit
interface Ethernet1/2
no ip unreachables
exit
interface Ethernet1/3
no ip unreachables
exit
interface Serial2/0
no ip unreachables
exit
interface Serial2/1
no ip unreachables
exit
interface Serial2/2
no ip unreachables
exit
interface Serial2/3
no ip unreachables
exit
interface Serial3/0
no ip unreachables
exit
interface Serial3/1
no ip unreachables
exit
interface Serial3/2
no ip unreachables
exit
interface Serial3/3
no ip unreachables
exit

8	ICMPv6 Unreachable disabled on interface(s)	High	False	False	Error ✖

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
no ipv6 unreachables
exit
interface Ethernet0/0
no ipv6 unreachables
exit
interface Ethernet0/1
no ipv6 unreachables
exit
interface Ethernet0/1.50
no ipv6 unreachables
exit
interface Ethernet0/1.60
no ipv6 unreachables
exit
interface Ethernet0/2
no ipv6 unreachables
exit
interface Ethernet0/3
no ipv6 unreachables
exit
interface Ethernet1/0
no ipv6 unreachables
exit
interface Ethernet1/1
no ipv6 unreachables
exit
interface Ethernet1/2
no ipv6 unreachables
exit
interface Ethernet1/3
no ipv6 unreachables
exit
interface Serial2/0
no ipv6 unreachables
exit
interface Serial2/1
no ipv6 unreachables
exit
interface Serial2/2
no ipv6 unreachables
exit
interface Serial2/3
no ipv6 unreachables
exit
interface Serial3/0
no ipv6 unreachables
exit
interface Serial3/1
no ipv6 unreachables
exit
interface Serial3/2
no ipv6 unreachables
exit
interface Serial3/3
no ipv6 unreachables
exit

9	ICMP Mask Reply disabled on interface(s)	High	False	False	Successful ✔
10	Directed broadcast disabled on interface(s)	Critical	False	False	Successful ✔
11	ICMP Redirects disabled on interface(s)	High	False	False	Error ✘

Found port(s) with error:
Tunnel0
Ethernet0/0
Ethernet0/1
Ethernet0/1.50
Ethernet0/1.60
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3
Serial2/0
Serial2/1
Serial2/2
Serial2/3
Serial3/0
Serial3/1
Serial3/2
Serial3/3

Generated fix:
interface Tunnel0
no ip redirects
exit
interface Ethernet0/0
no ip redirects
exit
interface Ethernet0/1
no ip redirects
exit
interface Ethernet0/1.50
no ip redirects
exit
interface Ethernet0/1.60
no ip redirects
exit
interface Ethernet0/2
no ip redirects
exit
interface Ethernet0/3
no ip redirects
exit
interface Ethernet1/0
no ip redirects
exit
interface Ethernet1/1
no ip redirects
exit
interface Ethernet1/2
no ip redirects
exit
interface Ethernet1/3
no ip redirects
exit
interface Serial2/0
no ip redirects
exit
interface Serial2/1
no ip redirects
exit
interface Serial2/2
no ip redirects
exit
interface Serial2/3
no ip redirects
exit
interface Serial3/0
no ip redirects
exit
interface Serial3/1
no ip redirects
exit
interface Serial3/2
no ip redirects
exit
interface Serial3/3
no ip redirects
exit

Routing

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	OSPF IPv4 Router ID	Medium	False	False	Error ✘

Found error in context(s):
router ospf 1

Generated fix:
router ospf 1
router-id 1.1.1.1

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
2	OSPF IPv6 Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospf ipv6 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
3	OSPFv3 Address Family General Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
4	OSPFv3 Address Family IPv4 Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
5	OSPFv3 Address Family IPv6 Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
6	EIGRP IPv4 Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv4 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
7	EIGRP IPv6 Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv6 not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
8	EIGRP Named IPv4 Router ID	Medium	False	False	Error ✘

Found error in context(s):
router eigrp EIGRP_NAMED
address-family ipv4 unicast autonomous-system 1

Generated fix:
router eigrp EIGRP_NAMED
address-family ipv4 unicast autonomous-system 1
eigrp router-id 2.2.2.2

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
9	EIGRP Named IPv6 Router ID	Medium	False	False	Successful ✔

Right configuration setting found in:
router eigrp EIGRP_NAMED
address-family ipv6 unicast autonomous-system 1
eigrp router-id 10.10.10.2

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
10	BGP Router ID	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function bgp not configured on device. Everything is OK.

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
11	OSPF IPv4 Log adjacency changes	Medium	False	False	Successful ✔
12	OSPF IPv6 Log adjacency changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospf ipv6 not configured on device. Everything is OK.

13	OSPFv3 Address Family IPv6 Log adjacency changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

14	OSPFv3 Address Family IPv4 Log adjacency changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

15	OSPFv3 Address Family IPv6 Log adjacency changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function ospfv3 not configured on device. Everything is OK.

16	EIGRP IPv4 Log neighbor changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv4 not configured on device. Everything is OK.

17	EIGRP IPv6 Log neighbor changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv6 not configured on device. Everything is OK.

18	EIGRP Named IPv4 Log neighbor changes	Medium	False	False	Error ✘

Error configuration setting found in:
router eigrp EIGRP_NAMED
address-family ipv4 unicast autonomous-system 1
no eigrp log-neighbor-changes

Found error in context(s):
router eigrp EIGRP_NAMED
address-family ipv4 unicast autonomous-system 1

Generated fix:
router eigrp EIGRP_NAMED
address-family ipv4 unicast autonomous-system 1
eigrp log-neighbor-changes

19	EIGRP Named IPv6 Log neighbor changes	Medium	False	False	Successful ✔
20	BGP Log neighbor changes	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function bgp not configured on device. Everything is OK.

21	RIP auto summary disabled	High	False	False	Successful ✔

Right configuration setting found in:
router rip
no auto-summary

22	EIGRP IPv4 Auto summary disabled	High	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv4 not configured on device. Everything is OK.

23	EIGRP IPv6 Auto summary disabled	High	True	False	Not relevant ✔

Comment:
Skipped, required function eigrp ipv6 not configured on device. Everything is OK.

24	EIGRP Named IPv4 Auto summary disabled	High	False	False	Successful ✔
25	EIGRP Named IPv6 Auto summary disabled	High	False	False	Successful ✔
26	BGP Auto summary disabled	High	True	False	Not relevant ✔

Comment:
Skipped, required function bgp not configured on device. Everything is OK.

27	BGP Multihop disabled or TTL security used	High	True	False	Not relevant ✔

Comment:
Skipped, required function bgp not configured on device. Everything is OK.

28	IP Source routing (IP Options) disabled	Critical	False	False	Successful ✔

Filtering

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	IP Options disabled	Critical	False	False	Error ✘

Generated fix:
ip options drop

Fix notice:
RSVP and other protocols that use IP Options packets may not function as expected.

Other

No.	Name	Severity	Skipped	Cannot determine search/fix	Status
1	Servis PAD disabled (Packet assembler disassembler)	High	False	False	Error ✘

Generated fix:
no service pad

2	BOOTP server disabled	High	False	False	Error ✘

Generated fix:
no ip bootp server

3	Ident protocol disabled	High	False	False	Successful ✔
4	Finger protocol disabled	High	False	False	Successful ✔
5	HTTP server disabled	High	False	False	Successful ✔
6	HTTPS server disabled	High	False	False	Successful ✔
7	TCP small server disabled	High	False	False	Successful ✔
8	UDP small server disabled	High	False	False	Successful ✔
9	MOP protocol disabled	High	False	False	Error ✘

Found port(s) with error:
Ethernet0/0
Ethernet0/1
Ethernet0/2
Ethernet0/3
Ethernet1/0
Ethernet1/1
Ethernet1/2
Ethernet1/3

Generated fix:
interface Ethernet0/0
no mop enabled
exit
interface Ethernet0/1
no mop enabled
exit
interface Ethernet0/2
no mop enabled
exit
interface Ethernet0/3
no mop enabled
exit
interface Ethernet1/0
no mop enabled
exit
interface Ethernet1/1
no mop enabled
exit
interface Ethernet1/2
no mop enabled
exit
interface Ethernet1/3
no mop enabled
exit

10	IP domain lookup disabled	High	False	False	Successful ✔

Right configuration setting found in:
no ip domain lookup

11	Gratuitous ARPs generation disabled	High	False	False	Error ✖

Generated fix:
no ip gratuitous-arps

12	Gratuitous ARPs reject enabled	High	False	False	Error ✖

Generated fix:
ip arp gratuitous none

13	Netflow is disabled	Notice	False	False	Successful ✔

Fix ignore comment:
By default fix is ignored due to disablement of traffic monitoring. Consider whether port mirroring is neccesary for monitoring

14	Netflow version 9 used	Medium	False	False	Not relevant ✔

Comment:
Module 15_14_netflow_version_9.yaml configured to run after 15_13_netflow.yaml with status error but that module has not run yet with specified cmd_match_status, 15_14_netflow_version_9.yaml will not run

15	Netflow traffic analyze disabled on interface(s)	Notice	False	False	Not relevant ✔

Comment:
Module 15_15_netflow_interface.yaml configured to run after 15_13_netflow.yaml with status error but that module has not run yet with specified cmd_match_status, 15_15_netflow_interface.yaml will not run

Fix ignore comment:
By default fix is ignored due to disablement of traffic monitoring. Consider whether port mirroring is neccesary for monitoring

16	Port mirroring disabled on interface(s)	Notice	False	False	Successful ✔

Fix ignore comment:
By default fix is ignored due to disablement of traffic monitoring. Consider whether port mirroring is neccesary for monitoring

17	Set always "UP" Loopback interface with IP address	Medium	False	False	Error ✖

Generated fix:
interface loopback 0
ip address 1.1.1.1 255.255.255.0
snmp ifindex persist
no ip redirects
no ip unreachables
no ipv6 unreachables
no ip proxy-arp
exit

Fix notice:
If IP address and mask is not in this module, fallback settings from own_variables.yaml are used. So it may cause same IP on loopbacks accross multiple devices!

18	Notification on memory IO leak/overflow	Medium	False	False	Error ✘

Generated fix:
exception memory ignore overflow io

19	Notification on memory CPU leak/overflow	Medium	False	False	Error ✘

Generated fix:
exception memory ignore overflow processor

20	Network boot disabled	Medium	False	False	Successful ✔
21	Network config load disabled	Medium	False	False	Successful ✔
22	SCP server enabled	Medium	False	False	Error ✘

Generated fix:
ip scp server enable

23	SCP alias copy instead of TFTP	High	False	False	Successful ✔
24	Protection of configuration deletion	High	False	False	Error ✘

Generated fix:
secure boot config
secure boot-config

Fix notice:
Just one of fixing command is applicable to device. There are more because of different syntax among IOS versions.

25	Archive and log config changes	Medium	False	False	Error ✘

Generated fix:
archive
path unix:
log config
logging enable
notify syslog
hidekeys
maximum 5
time-period 60

26	Terminate hanged inbound TCP connection to device	Medium	False	False	Error ✘

Generated fix:
service tcp-keepalives-in

27	Terminate hanged outbound TCP connection to device	Medium	False	False	Error ✘

Generated fix:
service tcp-keepalives-out

28	Encrypt all saved passwords in configuration	Critical	False	False	Successful ✔

Right configuration setting found in:
no service password-encryption

29	First Hop Redundancy Protocol used	High	False	False	Error ✘

Comment:
Cannot be fixed automatically! Cannot automatically determine which interface is sutable for deployment of FHRP protocols! Issue one of commands:
interface <interface name>
vrrp <group id> ip <ip address>
vrrp priority <value>
vrrp <group id> authentication md5 key-string <key>
fhrp version vrrp v3
or
interface <interface name>
standby <group id> ip <ip address>
standby priority <value>
standby <group id> preempt
standby <group id> authentication md5 key-string <key>
or
interface <interface name>
glbp <group id> ip <ip address>
glbp priority <value>
glbp <group id> preempt
glbp <group id> authentication md5 key-string <key>

Fix notice:
Issue one of these command for FHRP in interface which should act as default gateway:
interface <interface name>
standby <id> ip <ip address>

vrrp <id> ip <ip address>

glbp <id> ip <ip address>

30	VRRP version 3 used	High	True	False	Not relevant ✔

Comment:
Skipped, required function vrrp not configured on device. Everything is OK.

31	FHRP plaintext authentication disabled	High	False	False	Not relevant ✔

Comment:
Module 15_31_fhrp_plain_auth.yaml configured to run after 15_29_fhrp_used.yaml with status successful but that module has not run yet with specified cmd_match_status, 15_31_fhrp_plain_auth.yaml will not run

32	FHRP MD5 authentication enabled	High	False	False	Not relevant ✔

Comment:
Module 15_32_fhrp_md5_auth.yaml configured to run after 15_29_fhrp_used.yaml with status successful but that module has not run yet with specified cmd_match_status, 15_32_fhrp_md5_auth.yaml will not run

33	HSRP/GLBP preemption enabled	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function hsrp not configured on device. Everything is OK.

34	HSRP version 2 used	Medium	True	False	Not relevant ✔

Comment:
Skipped, required function hsrp not configured on device. Everything is OK.